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# ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT STRATEGIES (EC-LEDs) CLEAN ENERGY PROGRAM

## QUARTERLY PROGRESS REPORT

JANUARY 1, 2016 – MARCH 31, 2016

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April, 2016

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### **DISCLAIMER**

**The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.**

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## ACRONYMS

AD	Analytic Department
AOR	Agreement Officer's Representative
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BAU	Business as Usual
BP	British Petroleum
BREEAM	Building Research Establishment Environmental Assessment Method
CBSM	Community Based Social Marketing
CC	Climate Change
CFL	Compact Fluorescent Lightbulb
CoM	Covenant of Mayors
COP	Chief of Party
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DWG	Decision Ware Group
EB	Energy Balance
EBRD	European Bank for Reconstruction and Development
EC-LEDS	Enhancing Capacity for Low Emission Development Strategies
E5P	Eastern European Energy Efficiency and Environment Partnership
EE	Energy Efficiency
EPBD	Energy Performance of Buildings Directive
EU	European Union
EWG	Expert Working Group
FFC	Fast Forward Communications
G4G	Governance for Growth
GALA	Georgian Association of Landscape Architects
GB	Green building
GBCG	Green Building Council Georgia
GDP	Gross Domestic Product
GE	Georgia
GEC	Grants Evaluation Committee
GeMunee	Georgian Municipal Energy Efficiency
GHG	Greenhouse gases
GIZ	Intended Nationally Determined Contribution
GOG	Government of Georgia
GTU	Georgian Technical University
ICC	International Code Council
IECC	International Energy Conservation Code
INDC	Intended Nationally Determined Contribution
JRC	Joint Research Center
LED	Low emission development
LEED	Leadership for Energy and Environment Design
LEDS	Low Emission Development Strategy (ies)
MOE	Ministry of Energy
MoENRP	Ministry of Environment and Natural Resources Protection
MoESD	Ministry of Economy and Sustainable Development
MOU	Memorandum of Understanding
MRV	Monitoring, Reporting and Verification
Muni-EIPMP	Municipal Inventory, Projection and Mitigation Planning
NAMA	Nationally Appropriate Mitigation Actions
NGO(s)	Non-Governmental Organization(s)
NTC	New Technology Fund
PEA	Programmatic Environmental Assessment

PR	Public Relations
PSA	Public Service Announcement
PWD	People with Disabilities
RFP	Request for Proposals
SC	Steering Committee
SCM	Steering Committee Meeting
SDAP-Center	Sustainable Development and Policy Center
SEAP	Sustainable Energy Action Plan
SEO	Sustainable Energy Office
SIDA	Swedish International Development Cooperation
SWG	Sub-Working Group
TEC	Tender Evaluation Committee
TOT	Train-the-Trainer
USA	United States of America
USAID	United States Agency for International Development
USG	United States Government

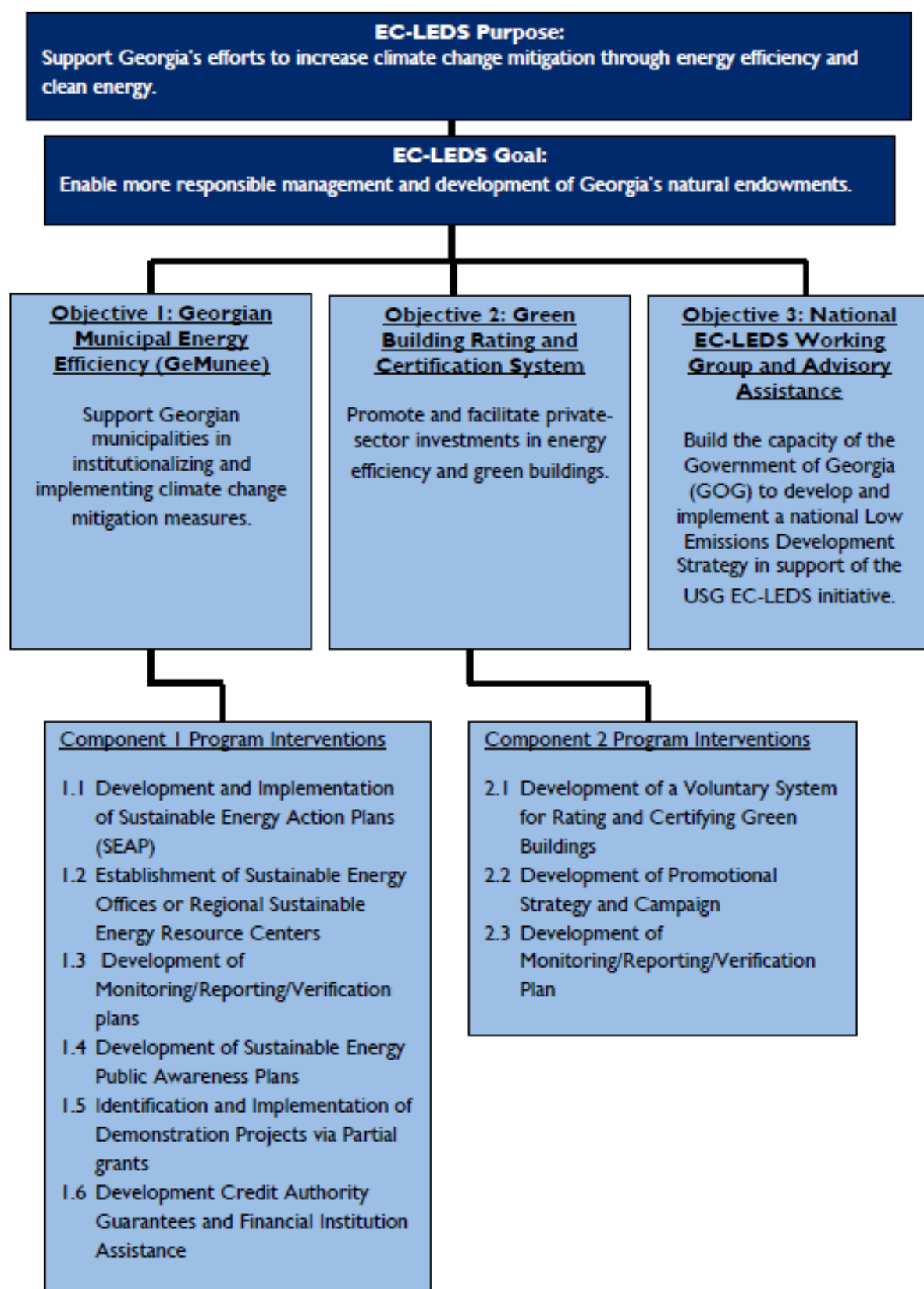
## I. EXECUTIVE SUMMARY

Georgia's Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program, funded by the United States Agency for International Development (USAID), is a four-year (October 2013 – September 2017) effort focusing on three activities: 1) Georgian Municipal Energy Efficiency (GeMunee); 2) Green Building Rating and Certification System; and 3) National EC-LEDS Working Group and Advisory Assistance. USAID awarded Winrock International a cooperative agreement to implement Georgia's EC-LEDS Clean Energy Program to support climate change mitigation by building municipal capacity in climate change mitigation measures and raising public awareness; increasing private sector investment in energy efficiency (EE) and green buildings (GB); and strengthening Government of Georgia (GOG) capacity to develop and implement a national Low Emission Development Strategy (LEDS). This report describes year three, quarter two activities of the EC-LEDS Clean Energy Program covering the period January 1, 2016 through March 31, 2016.

The objectives of the EC-LEDS program are to (1) support Georgian municipalities in institutionalizing and implementing climate change mitigation measures, (2) promote and facilitate private sector investment in energy efficiency and green buildings, and (3) build the capacity of the GOG to develop and implement a national Low Emission Development Strategy in support of the United States Government (USG) EC-LEDS initiative. During the four years, the EC-LEDS Clean Energy Program is expected to reduce greenhouse gas (GHG) emissions in Georgia by at least 236,372.9 metric tons of CO<sub>2</sub> equivalent, facilitate up to \$14 million in private sector investments in clean energy, and lead to energy savings of up to 315 GWh (the equivalent of approximately \$22 million).

**Figure I**, EC-LEDS Activities Map, illustrates the project purpose, goal, the objectives, and the program initiatives associated with each objective.

Figure 1. EC-LEDS Activities Map



## II. YEAR THREE, QUARTER TWO HIGHLIGHTS

### A. PROGRESS TO DATE

A summary of progress through end of year three, quarter two by selected indicators is provided below. If total cumulative actual to date is zero, the indicator is not included in the table below.

**Table I. Summary of Total Cumulative Actuals vs. LOP Target by Output and Outcome Indicators**

Indicator	Type	Total Cumulative Actual (Y1+Y2+Y3/Q2)	Y3 Target	LOP Target
OC2: Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO <sub>2</sub> equivalent (CO <sub>2</sub> e), reduced or sequestered as a result of USG assistance	Outcome	0	55,000	236,000
OC3: Energy saved due to energy efficiency/conservation projects as a result of USG assistance	Outcome	0	75,000	315,000
OC4: Number of private sector clean energy investments	Outcome	3.36	3.64	14
OC5: Number of local organizations positioned to receive USG funding and implement USG projects as a result of EC-LEDS assistance	Outcome	0	1	1
OC6: Percentage of individuals reached by the public awareness campaign who take at least one energy saving action	Outcome	0	10%	10%
OC7: Expected lifetime energy savings from energy efficiency or energy conservation, as a result of USG assistance (OC7)	Outcome	19,929,600	44,583,406	
OC8: Projected greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to clean energy as supported by USG assistance	Outcome	1,699,549	3,237,402	
OPI: Number of low emission development plans developed and/or implemented as a result of USG assistance (LEDS, SEAP, other)	Output	8	3	10
OP2: Number of Sustainable Energy Offices (SEOs) or regional Sustainable Energy Resource Centers established in participating municipalities	Output	0	2	5
OP4: Number of stakeholders using climate information in their decision-making as a result of USG assistance.	Output	20	2	16
OP5: Number of laws, policies, strategies, plans, agreements or regulations addressing climate change mitigation officially adopted or implemented/proposed with USG assistance	Output	1	1	3

Indicator	Type	Total Cumulative Actual (Y1+Y2+Y3/Q2)	Y3 Target	LOP Target
OP6: Number of climate change mitigation tools, technologies or methodologies developed, tested and/or adopted as a result of USG assistance	Output	2	2	2
OP7: Number of households/businesses/public institutions implementing energy efficiency measures as a result of USG assistance (# HHs, # businesses, # institutions)	Output	0	1,000	1,500
		0	8	10
		0	8	10
OP8: Number of climate change mitigation projects implemented as result of USG assistance	Output	2	15	20
OPI0: Number of individuals reached through outreach campaigns	Output	521,518	250,000	1,000,000
OP 11: Number of USG-supported training or activities that contribute to building the EE knowledge and skills in the GOG, Municipalities, industry and other stakeholders	Output	40	14	50
OPI3: Value of grants disbursed as a result of USG assistance for scientific research and energy efficiency pilot projects	Output	\$ 175,012.00	\$ 324,988.00	\$ 500,000.00
OPI4: Number of promotional plans and campaigns implemented to increase awareness of citizens about energy efficiency	Output	2	2	2
OPI5: Number of beneficiaries receiving improved infrastructure services due to USG assistance	Output	0	2	3
OPI7: Number of Monitoring, Reporting, and Verification (MRV) plans developed to track the impact of SEAP implementation	Output	8	3	10
OPI8: Number of individuals at national and local level trained in climate change as a result of USG assistance	Output	349	20	70
OP22: Number of decisions made by LEDS steering committee or involved agencies using analysis based on MARKAL or other appropriate tools	Output	2	2	2

## B. COMPONENT ONE HIGHLIGHTS

- Georgian Version Bolnisi Municipality SEAP was finalized.
- Work on Telavi Municipality SEAP on local level commenced with technical support by Remissia experts.

- The workshop on parameters and techniques for SEAP implementation monitoring was conducted on March 31 in Coste Hotel Tbilisi. 8 municipality representatives attended the workshop.
- EC-LEDS held meetings with Kutaisi, Zugdidi and Batumi municipalities to discuss and plan concrete steps toward establishing SEOs. As a result, EC-LEDS and municipalities agreed that the municipalities would incorporate SEO functions into their Economic Development Departments. EC-LEDS is currently assisting municipalities in drafting amendments to the department charters, developing recommendations about SEO functions and staffing plan required to implement said functions.
- EC-LEDS tender evaluation committee selected three projects for round two of the partial grants program. The projects will be implemented in Akhaltsikhe, Rustavi and Telavi City municipalities.
- EC-LEDS selected vendors for Batumi and Zugdidi Street lighting projects.

### **C. COMPONENT THREE HIGHLIGHTS**

- Winrock intensified activities under Component three on updating MARKAL-Georgia. The EC-LEDS team made all-important changes to the model templates; including shifting the base year from 2012 to 2014 and recalibrate. As such, MARKAL-Georgia is fully up to date.
- Several sensitivity scenarios (for Gross Domestic Product (GDP) and population growth) were prepared and the results were provided to the Climate Change Office of the Ministry of Environment and Natural Resources Protection
- Based on the research and findings of the analyzed sectors Winrock worked out the total amount of emissions and calculated Business As Usual Emissions (BAU) – for both energy BAU and non-energy BAU scenarios.
- At the request of the climate change (CC) office EC-LEDS made a special focus on the emissions from transport sector and related air pollutions
- EC-LEDS arranged working meetings of the Transport and Industry sub-working groups (SWG) at the Ministry of Economy and Sustainable Development, discussed the issues related to the emission from the transport sector and provided consultancy and advisory services.
- The preliminary list of mitigation measures that will be analyzed using MARKAL-Georgia were provided to the Ministry of Energy for their analysis.
- Development of sectoral overviews for LEDS document is underway.
- On the job training for the Ministry of Energy Analytic Department staff was conducted on a regular basis.

### **III. ACTIVITIES COMPLETED DURING YEAR THREE, QUARTER TWO**

#### **A. COMPONENT ONE: GEORGIAN MUNICIPAL ENERGY EFFICIENCY (GEMUNEE)**

##### ***i. Develop and Implement Sustainable Energy Action Plans (SEAPs)***

###### **1. Develop Muni-EIPMP Analytical Tool**

During this quarter, EC-LEDS tested and updated the muni-EIPMP tool under the context of developing the Bolnisi Municipality SEAP. The testing and updating will continue as the remaining two SEAPs are developed during the remainder of Year three.

###### **2. Develop and Conduct Workshops and On-the-Job Training on SEAP Development and Monitoring**

During this quarter, EC-LEDS held or participated in four main events; three municipality-specific working meetings and one SEAP monitoring workshop. The details on each event are provided below.

On March 31, 2016, EC-LEDS conducted a workshop on SEAP monitoring parameters and techniques in Coste Hotel Tbilisi. Representatives of eight municipalities attended the workshop. Three Remissia experts gave five presentations on several topics, including: (1) monitoring of mitigation measures, (2) necessary parameters for monitoring per sector, (3) review of the monitoring template on the CoM web site, (4) the muni-EIPMP tool itself, and (5) possible institutional arrangements for an effective monitoring process. In the second half of the workshop, the participants were divided into three working groups to undertake practical exercises on monitoring issues.

Secondly, the Remissia team conducted a working meeting at Bolnisi Municipality with the participation of several Unit and Services representatives (Head of Infrastructure Unit; Head of Ltd. “Municipal Transport of Municipality, etc.) and local experts hired to support the data gathering process locally. The Remissia expert team facilitated the discussion on future mitigation actions in all SEAP sectors. At the end of the working meeting, the representatives of the Municipality identified a considerable number of mitigation actions to be included in the SEAP document. The Remissia expert team also met with the local farmers of Bolnisi Municipality and representatives of the Agriculture Agency to identify potential entry points for CO<sub>2</sub> emission reductions in the agriculture sector through SEAP mitigation actions as well as possible project proposals.

The first working meeting with the SEAP coordinator and local experts in Telavi municipality took place to discuss the types of needed data and techniques for efficient data collection. Remissia experts shared the experience of other municipalities and provided technical guidance. Participants

of the working group discussed and agreed upon a time schedule for development of the SEAP document.

Remissia participated in the workshop organized by Tbilisi City Hall in partnership with Fraunhofer Institute on the topic of Morgenstadt City Lab Tbilisi. The aim of the workshop was to support further development of the ideas for the projects and measures to help boost Tbilisi's sustainable development.

### 3. Assist in Developing, Revising, and Updating SEAPs for municipalities with Priority Needs

During this quarter, EC-LEDS finalized the Georgian version of Bolnisi Municipality's SEAP with active participation of Bolnisi Municipality representatives and local experts, the team also received technical support and supervision from Remissia experts. As this was the first time the team worked on an a SEAP from the entire municipality level, the working processes took more effort and time to finalize on time. A novelty of Bolnisi's SEAP is agriculture sector chapter which the team elaborated based on consultations with local farmers. This innovative aspect of the SEAP covers measures to reduce CO<sub>2</sub> emissions from energy use in the agriculture sector. Bolnisi SEAP is accompanied by a MRV Plan and as well as a communication strategy.

Additionally, local experts are progressing with their work on Telavi's SEAP. The experts are regularly collecting and analyzing the data for different sectors. Remissia experts are in regular communication with them and provide technical guidance and supervision as needed and requested.

## ***ii. Establish Sustainable Energy Offices or Regional Sustainable Energy Resource Centers***

During this quarter, EC-LEDS made great strides under this task with Kutaisi, Zugdidi, Batumi, and Akhaltsikhe municipalities.

In February 2016, EC-LEDS held meetings with Kutaisi, Zugdidi, and Batumi municipalities to establish a plan and develop concrete steps toward establishing SEOs. The municipalities agreed to incorporate SEO functions into their Economic Development Departments. EC-LEDS is currently providing assistance to municipalities in drafting amendments to their department charters, developing recommendations about SEO functions, and developing staffing plans required to implement said functions.

In March, the EC-LEDS team, together with a legal advisor, travelled to Akhaltsikhe to meet with municipality representatives and identify areas where the municipality needed assistance in setting up and launching Sustainable Development Agency activities. At the meeting, the parties agreed that EC-LEDS would review the agency's charter to ensure that all CoM functions are included and would revise the charter to allow for flexibility in the agency's activities and areas of work, further enhancing its sustainability.

### ***iii. Develop Monitoring/Reporting/Verification (MRV) Plans***

The EC-LEDS team developed the MRV Plan for Bolnisi Municipality's SEAP, along with the actual SEAP document.

### ***iv. Develop Sustainable Energy Public Awareness Plans***

In the reporting period, EC-LEDS updated the National Communications Plan developed in year one. The Program will continue to take a two-pronged strategic approach to communications: 1) broad information campaigns at the national and local levels to raise general energy efficiency and conservation awareness; and, 2) community-based social marketing to change targeted behavior in selected communities. This quarter in particular, EC-LEDS worked with Kutaisi City Hall.

Kutaisi City Hall addressed EC-LEDS with an official letter requesting to change the planned greening activities under Kutaisi's Community Based Social Marketing (CBSM) campaign. The City Hall made a decision to arrange an energy efficient public park, which will be located above the underground on Rustaveli Avenue in the central-historical district of the city. The location is crucial as it includes many places of public gathering, including: public transport stops, tourism information center, Art Gallery, Public School #1, Golden Marquee, mixed market, and various merchant entities located in the underground. The park will serve as a recreation area for the residents of Kutaisi as well as tourists.

Kutaisi City Hall plans to install the Daisy-shaped "Solar Tree" equipped with solar elements and modern technologies including USB charging points (for cell phones, notebooks, and other electrical devices), Wi-Fi, electronic library, benches and greening (the park will be surrounded with bush plants) and solar energy lighting. As a signatory to the Covenant of Mayors (COM), Kutaisi City Hall's strategy for reduction of GHG emissions envisages reduction of energy consumption using economical accessible energy efficient/renewable energy technologies.

EC-LEDS decided to support the request of Kutaisi Municipality and back the installation of a Solar Tree as part of its CBSM Campaign in Kutaisi. The draft report on the CBSM campaign design was finalized and submitted to USAID in January.

The CBSM launch ceremony will be held during the celebration of Kutaisoba holiday, which due to the Easter holidays, was postponed from the originally planned date of May 2<sup>nd</sup> to the beginning of June 2016.

#### ***v. Identify and Implement Demonstration Projects through Partial Grants***

During the reporting period, EC-LEDS continued to work on selecting grant recipients for round two of the partial grants program announced in October 2016. EC-LEDS tender evaluation committee submitted their additional questions for each applicant to EC-LEDS at the December 24, 2015 meeting. EC-LEDS then sent questions to applicants individually and asked for responses before the January 12, 2016 deadline. As the committee members deemed the responses submitted by applicants insufficient, EC-LEDS decided to hold individual interviews with each applicant. EC-LEDS discussed additional questions provided by the committee members at these meetings and asked the applicants to submit responses to questions along with revised applications and any additional documents requested no later than February 12, 2016.

EC-LEDS held the final meeting of the committee on February 29, 2016, where the committee members discussed the revised applications, provided their final scores, and issued recommendations for award. Table 2 below lists applications recommended for award along with their final evaluation scores.

**Table 2. Grant Applications Recommended for Award**

<b>City</b>	<b>Applicant Name</b>	<b>Grant Project Title</b>	<b>Requested Grant Amount (USD)</b>	<b>Total Project Cost (USD)</b>	<b>Final Evaluation Score</b>
<b>Akhaltzikhe</b>	Akhaltzikhe City Municipality	Energy Savings in Lighting Systems at Rabati Castle (Akhaltzikhe)	<b>50,000</b>	<b>246,345</b>	<b>475</b>
<b>Rustavi</b>	GEREUA	Heidelberg Cement Georgia CM3 Research and Renovation (Rustavi)	<b>49,938</b>	<b>349,938</b>	<b>465</b>
<b>Telavi City</b>	New Technology Center	Green Recreation Zone in Telavi City	<b>50,000</b>	<b>829,167</b>	<b>515</b>
<b>Total</b>			<b>149,938</b>	<b>1,425,450</b>	

As the above table shows, the committee recommended three applications for award.

EC-LEDS submitted a grant selection memo to USAID and received approval. Currently, EC-LEDS is finalizing agreements with the sub-recipients.

During this reporting period, EC-LEDS continued tender evaluation process for Batumi and Zugdidi Street lighting projects.

EC-LEDS sent all Tender Evaluation Committee (TEC) members evaluation forms and asked them to evaluate each candidate according to the procedures discussed at the TEC meetings. EC-LEDS disqualified one bidder, Vyrtych, due to incompliance with source country requirements. As such, the TEC members evaluated seven bids, with two bids being from the same company, UGT. All six bidders, being Georgian and US companies, complied with geographic code, source and nationality

requirements. . In addition, EC-LEDS requested all qualified bidders to provide quality certificates for their proposed products. As a result, GTG (Phillips representative), and Enterra (OMS representative) provided international quality certificates, with other companies not being able to provide international certificates; UGT provided an Ukrainian quality certificate, and other bidders provided no certificates. EC-LEDS shared all of the above-mentioned information and documents with TEC members, and the members evaluated the bids for Batumi and Zugdidi separately.

As a result of the evaluation process, the TEC members selected GTG as the vendor for Zugdidi and EnTerra for Batumi.

#### ***vi. Development Credit Authority Guarantees and Financial Institution Assistance***

EC-LEDS held a meeting at Tbilisi City Hall with the Head of the Economic Policy Department and the Head of Kindergarten Agency. The purpose of the meeting was to introduce the Kindergarten Agency Head to the concept proposal developed by EC-LEDS on the energy efficiency rehabilitation program for Tbilisi Kindergartens. If the Kindergarten Agency decides to go ahead with the project, EC-LEDS will assist them in obtaining funding for the project.

### **B. COMPONENT TWO: GREEN BUILDING RATING AND CERTIFICATION SYSTEM- COMPLETED**

In September 23, 2015, EC-LEDS and USAID agreed that the Program met all Component Two targets and thus the Component is deemed complete and there will be no continuation of activities in year three.

### **C. COMPONENT THREE: NATIONAL EC-LEDS WORKING GROUP AND ADVISORY ASSISTANCE**

#### ***I. Support to GOG in Developing the LEDS Document***

During quarter two, year three, EC-LEDS intensified Component three activities, specifically updating MARKAL-Georgia, which included shifting the base year from 2012 to 2014 and checking/validating/updating all other data. EC-LEDS simplified the model to fit with available data and made easier for the Analytic Department (AD) of the Ministry of Energy (MOE) to operate. Remissia incorporated all comments from the AD MOE and DWG in the model. Several sensitivity scenarios (for GDP and population growth) were prepared and results were sent to the Climate Change Office of the Ministry of Environment and Natural Resources Protection. DWG started setting up the scenarios in MARKAL-Georgia for analysis of mitigation measures in close coordination with Remissia.

EC-LEDS prepared the preliminary Table of Contents (TOC) for the full LEDS document, while Remissia staff and experts continued work on the development of sectoral overviews for four LEDS

chapters (energy, buildings, transport, and industry). Each chapter includes a description of the current situation in each sector, past trends and existing development goals, as well as legislative base and institutional set-up for the sector. EC-LEDS analyzed the emission trends for the past years for all four considered sectors – power/energy, buildings, transport, and industry.

EC-LEDS elaborated the preliminary list of mitigation measures that will be analyzed using MARKAL-Georgia and sent them to the Ministry of Energy for their analysis in relation to overlaps with the National Energy Efficiency Action Plan. To include all actions that are strategically viable and underway, several meetings were carried out with respective departments in the Ministries, including: Energy Efficiency and Renewable Energy Department at the Ministry of Energy; Transport Policy department at the Ministry of Economy and Sustainable Development; and Air Protection Department at the Ministry of Environment and Natural Resources.

Industry questionnaires that were filled in by the site managements were analyzed for mitigation options and energy consumption indicators. Relevant metrics and indicators were developed (emissions per capita, emissions per GDP, etc) for each sector and where possible compared with similar metrics from other countries.

To build the technical capacity of the MOE AD staff, regular weekly meetings during this quarter were conducted by Remissia experts.

## ***II. Analytical and advisory service***

During the reporting period, EC-LEDS' COP, LEDS Advisor, and Remissia technical Director held regular weekly working meetings. The meetings were dedicated to the discussions on project progress as well as the updates of the LEDS document development process. EC-LEDS worked with the Climate Change office staff to coordinate works and research stipulated by the project. The project regularly assisted the MoENRP in analyzing the emission sources from various sectors as well as discuss mitigation options in the relevant sectors.

Based on the research and findings of the analyzed sectors, EC-LEDS worked out the total amount of emissions and calculated Business As Usual Emissions (BAU) for both energy BAU and non-energy BAU scenarios. The results were discussed with SWG experts. Defining the mitigation measures in the relevant sectors followed the process. EC-LEDS and CC office analyzed the strategic views of different Ministries – the major stakeholders of the LEDS process.

Additionally, EC-LEDS and CC office worked on organizing and arranging two main events: (1) the expert working group meeting and (2) coordination committee meeting, both planned for the end of March 2016.

## ***III. Capacity building and technical assistance***

EC-LEDS organized and conducted a number of working meetings with the Transport Sub Working Group at the Ministry of Economy and Sustainable Development. The new Transport SWG Head, and the members of the transport SWG, discussed a wide spectrum of issues related to transport sector emissions. EC-LEDS, transport SWG and the Head of Land Transportation Department discussed projects and strategies for the transport sector, the long term development plans, as well as strategies in land and railroad transport. The Ministry provided transport sector data on current projects along with related statistics.

EC-LEDS had a meeting with the Air Protection Department Head of the MoENRP. The meeting was dedicated to the discussions on air quality, air protection, and air pollution issues in the transport sector. The parties discussed GOG decrees # 124 and # 238, regulating the quality of the gasoline and diesel fuels in Georgia. They also discussed the European Union (EU) directives related to the EU-Georgia association agreement # 2009/30/EC related to fuel quality. EC-LEDS provided the results of the research and findings of LEDS in the field of transport related air pollution and GHG emissions.

EC-LEDS conducted a working meeting with the representatives of Georgian Railway (GR). The GR experts provided detailed information related to ongoing and planned projects of Georgian Railway, as well as trends of freight and passenger transportation. The parties also discussed the potential of Georgian Railway to increase freight cargo share of freight truck vehicles and thus reduce emissions related to cargo transportation. The mitigation measures related to Georgian railway system were also discussed at the meeting.

In cooperation with SWGs, EC-LEDS worked on transport sector mitigation options.

#### ***IV. Advisory assistance to GOG***

The EC-LEDS Advisor, at the request of Ministry of Economy of Georgia, provided advisory services related to implementation of international alternative energy sources development projects in Georgia. The advisor analyzed the environmental effects and expected ecological benefits of the clean energy projects currently under development by the Japanese companies in Georgia.

The LEDS advisor had a meeting with the Deputy Head of Legal Department of the Ministry of Economy and Sustainable Development, and the representatives of a Japanese company, Fuji Furukawa, which works in the field of solar energy development. At the request of the Ministry, the LEDS Advisor provided information and analyses on alternative energy projects being currently under implementation in Georgia and their relevance to the LEDS process.

The LEDS advisor had a meeting with the Head of Tbilisi Municipality Transport Department. LEDS advisor provided LEDS findings related to the emissions from the transport sector, namely from the Tbilisi municipality transport. The parties also discussed the possibilities of introducing alternative, renewable, eco-friendly fuel for the municipality transport fleet.

#### ***V. Ensure involvements in international projects, trainings, and programs***

EC-LEDS was very active during this quarter and participated in several seminars workshops, and meetings. A summary of these events are provided below:

- In February, the EC-LEDS Advisor participated in an international Seminar “Efficient Energy Use and Planning”, organized and sponsored by the Swedish International Development Agency (SIDA). SIDA dedicated the seminar to modern technologies and trends designed to reduce energy consumption in the residential sector and to analyze the best practice of EU countries, which is relevant for the Eastern European countries.

- The LEDS advisor participated in an international seminar at Ilia State University. The aim of the seminar was to promote energy efficient buildings and to raise awareness about the benefits of energy efficiency and planning in residential buildings, promote new building materials, and the new trends in Green Architecture.
- On March 4, The EC-LEDS COP participated in the Stakeholders' Coordination Panel organized by the National Association of Local Authorities of Georgia (NALAG) under the USAID "Institutionalization of Climate Change Adaptation and Mitigation in Georgian Regions" project. Different experts presented the Road Map on Climate Change elaborated under the program. Participants actively discussed LEDS process related activities during the meeting.
- The EC-LEDS Advisor participated in the workshop and stakeholders meeting of the UNDP project, "Promotion of Biomass Production and Utilization in Georgia", which is supported and implemented by MoENRP. At the meeting, the attending experts and participants discussed ways to further develop alternative fuel production from biomass i.e. pellets and briquettes and related issues such as technologies, raw materials, legislations, in order to reduce fire wood consumption as the mitigation option to reduce GHG emissions in Georgia.
- EC-LEDS participated in Georgia's First Biennial Update Report (FBUR) to the UNFCCC; the project is managed by the UNDP. The workshop was focused on the Inventory of the GHG Emissions for the period of 2010-2013. The EC-LEDS Advisor and Remissia's Technical Director provided information and clarification to several issues related to Energy and Transport sectors emissions and respective mitigation measures to workshop participants.
- EC-LEDS took part in the Workshop "Developing a Green Growth Policy Paper for Georgia". The objective of the workshop was to present and discuss key findings and recommendations of the Green Growth paper with relevant stakeholder groups including government ministries and state agencies, business associations, NGOs, academy, as well as international organizations.
- EC-LEDS participated in the work of the National Conference "Climate Change at the Local Level: Policy and Action", supported and financed by USAID. The National Conference was organized in the framework of the program "Institutionalization of Climate Change Mitigation and Adaptation in Georgian Regions" implemented by the National Association of Local Authorities of Georgia (NALAG).

## **D. PROJECT ADMINISTRATION**

During year three quarter two, EC-LEDS completed the following project administration tasks:

- Received Modification number seven, dated March 22, 2016. As a result of this modification, the cooperative agreement is now fully obligated.
- Submitted interim comments on EC-LEDS Mid-Term Evaluation to USAID on January 8, 2016;

- Submitted responses to Limited Financial Review recommendations to USAID dated January 22, 2016;
- Received Final (revised) Mid Term Evaluation Report on February 3, 2016;
- Received an approval on Quarterly Progress Report of Year three, Quarter one on February 11, 2016;
- Received AOR approval on Grants Selection Memo, EC-LEDS Partial Grants Program Round two, on March 17, 2016; and
- Submitted Data Universal Numbering System (DUNS) waiver request for two (Akhaltsikhe and Telavi) Municipalities on March 10, 2016. As this waiver was not approved, Winrock started working with local municipalities on registration with DUNS;

## **E. LESSONS LEARNED**

The following items were lessons learned during this quarter:

- The GoG needs more persistent advisory service, especially while preparing for the major international events;
- Extra meetings and trainings give more effect and ensure better results in combining with planned and regular sessions;
- The sectorial SWGs will work more effectively when they receive strict directions from the relevant ministries;
- The EC-LEDS project goes on much more successfully when the communication and cooperation with the stakeholders are even more intensive than planned earlier.

## **F. ENVIRONMENTAL PROTECTION ACTIVITIES**

Under the scope of 22 CFR 216 Environmental Compliance Procedures and approved Programmatic Environmental Assessment (PEA) document, EC-LED Environmental specialist participated in technical evaluation process of the second round sub-grant applications in order to ensure incorporation of environmental safeguards into the technical designs of potential projects. A series of site-visits to the proposed sub-grant project locations were conducted. An Environmental Review Checklist and several Activity Specific Mitigation and Monitoring Plans for already selected sub-grant projects have been outlined. Final stipulation of the second round sub-grant projects related Activity-Specific Environmental Mitigation and Monitoring commitments will go in parallel with finalization of sub-grant projects related technical scope and specifications.

## G. CROSS-CUTTING ACTIVITIES

### i. National Public Communications and Outreach

In the reporting period, EC-LEDS produced a bilingual promotional brochure about EC-LEDS major accomplishments for distribution during EC-LEDS events and meetings.

EC-LEDS produced the Quarterly Newsletter Winter 2015/16 for distribution during EC-LEDS events and via e-mail.

In the reporting period EC-LEDS Outreach Team initiated a Facebook contest entitled “Energy Efficiency is a Smart Choice”. The contest was launched on October 7 and ended on February 24<sup>th</sup>, 2016. The EC-LEDS Outreach Team posted a question once a week and awarded winners with EC-LEDS promotional caps, t-shirts, and key chains. A total of twenty winners have been awarded at the EC-LEDS office.



**Photo 1. EC-LEDS Accomplishments brochure**

During this reporting period, the EC-LEDS EE public service announcements (PSA) were aired on the National TV channels Imedi TV and Channel 1.

The EC-LEDS Outreach Team produced two new PSAs. The program produced two 30-seconds films in which the audience is given examples of energy efficient facts convincing of doing or not doing any particular actions.

The content of PSAs are as follows:

#### PSA#1

During a sunny day, move curtains to use daylight efficiently.

If a tap is leaking one drop per second, you will lose 625 liters of water per month. 625 liters of water would fill three average size water tanks. Reducing water losses by at least 5%, we can save 40.3 m3 of water annually, which is 13.8 million kWh saved energy. The less water is used the less energy is consumed. Energy Efficiency is a smart choice!

#### PSA# 2

A laptop consumes 10% less energy than a PC.

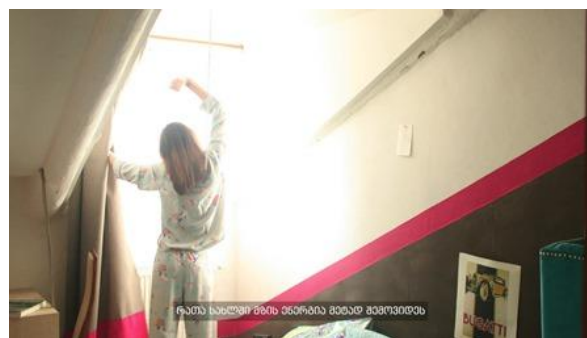
When cooking, the size of a pan should fit the size of a burner.

By covering a sauce pan tight, you save 14% energy.

If fire goes out, it is necessary to close the cover in order to maintain warmth in the room generated from fire place or wood stove.



**Photo 2. EC-LEDS PSA screenshot**



**Photo 3. EC-LEDS PSA screenshot**

EC-LEDS participated in the opening ceremony of the energy efficient and energy saving classroom in the Tbilisi State Academy of Art on March 25, 2016. The classroom was completed in the framework of a Memorandum between Union of Experts Sustainable Energy and Environment, LTD Nova, Company Izocam, and Tbilisi State Academy of Art. The goal of this activity was to showcase energy efficient and energy saving technologies to the guests and emphasize the importance of energy efficient measures to the students of architecture, construction and, energy faculties in the process of project design, construction or rehabilitation. The event was attended by Tbilisi Vice Mayor, Deputy Minister of Economy and Sustainable Development, Marketing Director of IZOCAM and other honorable guests.

## **ii. People with Disabilities (PWD), Youth and Gender**

Students from Sakramuli, Nichbisi and Sioni villages took part in the Youth Energy Efficiency Event on March 23, 2016. EC-LEDS empowers youth through training on energy efficiency and renewable energy technologies. The main objective is to involve youth in energy efficiency, contributing to climate change mitigation.

The students were selected from “Momavlis Taoba” (Future Generation) program partner schools from 9th to 11th grades of Mtskheta, TianeTi, and Dusheti Municipalities in collaboration with the Mtskheta-Mtianeti Committee of Anti-Violence Network of Georgia. The Committee implements Momavlis Taoba project with 27 partner public schools in the region. The “Momavlis Taoba” (MT) program, funded by USAID, is being implemented in Georgia by PH International and is supported by the Ministry of Education and Science of Georgia (MES).

During the event, students were given a presentation “How to Save Energy” followed by a contest “Energy Efficiency Is A Smart Choice” to demonstrate the EE skills acquired at the seminar. The seminar was conducted by the Dean of Energy and Telecommunications Faculty at the Georgian Technical University, Professor. Professor spoke about the importance of energy efficiency, ways of saving energy, energy audits, energy efficiency in the residential sector, energy efficient technologies, simple tips to save energy at home, energy efficient appliances, renewable energies, energy efficient/renewable energy projects implemented under donor support, energy efficiency, and climate change. The winners were awarded medals, and all students were given participation certificates.



**Photo 4. EC-LEDS promotional items**

### ***iii. Cooperation with other USAID programs***

EC-LEDS established good communication and cooperation with other USAID sponsored programs, including G4G, Waste Management Technologies in Regions, as well as the EU funded programs - ClimaEast, German-funded support for Buildings NAMA, and GIZ's support for Georgia's Intended Nationally Determined Contribution (INDC).

EC-LEDS continued cooperation with USAID's "Momavlis Taoba" (Future Generation) Program implemented by PH International and supported by the Ministry of Education and Science of Georgia (MES). In March students from Sakramuli, Nichbisi and Sioni villages took part in the Youth Energy Efficiency Event. During the event, students were given a presentation "How to Save Energy" followed by a contest "Energy Efficiency Is a Smart Choice" to demonstrate the EE skills acquired at the seminar. The Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor Gia Arabidze, conducted the seminar.

## IV. YEAR THREE WORK PLAN: DELIVERABLES SUBMITTED IN YEAR THREE QUARTER ONE

Component	Deliverable/Product	Date Submitted
All	EC-LEDS Quarterly Progress Report - Year 3 Quarter I	29-Jan-16
Component I	Workshop Report_Tbilisi November 2015	29-Jan-16
Public Outreach	Community Based Social Marketing Campaign Design Report	29-Jan-16
M&E	GIS Data Collection Template - Year 3, Quarter I	12-Feb-16
Component I	Memo on Updated MARKAL-Georgia Model	29-Feb-16
Component I	Memo on the Mitigation Measures for MARKAL-Georgia	29-Feb-16
Component I	Grant Selection Memo - Round Two	29-Feb-16
Component I	Grant Selection Memo	10-Mar-16
Component I	EC-LEDS Request for Grant Approvals	22-Mar-16
Component I	Sustainable Energy Action Plan for Bolnisi (Geo)	31-Mar-16
Public Outreach	Media Coverage Report _ March 2016	31-Mar-16
Component 3	Memo on Selection of Mitigation Measures for Each Energy/MARKAL Sector and Characterization of Mitigation Measures Parameters for Georgia's Context	31-Mar-16

The indicators with year three targets include outcome indicators OC2; OC3; OC4 OC5; OC6; OC7; OC8 and output indicators OPI, OP2, OP4, OP5, OP6, OP7, OP8, OPI0, OPI1, OPI3, OPI4, OPI5, OPI7, OPI8, OP22. During quarter two of year three, progress was demonstrated in most of the indicators and some of them even exceeded defined targets. Other activities in all components and cross-cutting issues are being carried out as planned and measurable results will be documented as they are achieved.

During this reporting period, EC-LEDS uploaded all datasets to Open Data Center web-portal. In addition, datasets developed in Y3Q1 & Y3Q2 were submitted to AOR for review. Furthermore, all intellectual outputs elaborated in Y3Q1 & Y3Q2 were uploaded on Development Experience Clearinghouse (DEC).

INDICATOR TITLE: <b>Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO<sub>2</sub> equivalent (CO<sub>2e</sub>), reduced or sequestered as a result of USG assistance (OC 2)</b>									
UNIT:	DISAGGREGATE BY: <i>None</i>								
Metric tons of CO <sub>2</sub>	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
Metric tons of CO <sub>2</sub>	0	20,000	0	43,000		55,000		236,000	

Indicator Title: <b>Energy saved due to energy efficiency/conservation projects as a result of USG assistance (OC 3)</b>									
UNIT:  GW/h <sub>e</sub>	DISAGGREGATE BY: None								
	Geographic Location	Event			Date		total		
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
	GW/h <sub>e</sub>	0	20,000		42,000		75,000		315,000

Indicator Title: <b>Number of private sector clean energy investments (OC 4)</b>									
UNIT:  USD	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>			<i>total</i>	
Results:									
<b><i>Additional Criteria</i></b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b><i>Baseline</i></b>	<i>Y1</i>		<i>Y2</i>		<i>Y3</i>		<i>End of Project</i>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
USDMillion									
	0	0	0	4.0	3.36	3.64		14	

INDICATOR TITLE: <b>Number of local organizations positioned to receive USG funding and implement USG projects as a result of EC-LEDS assistance (OC 5)</b>									
UNIT:  USD	DISAGGREGATE BY: <i>Region or Municipality</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
USD Million	0	0	0	0		1		1	

INDICATOR TITLE: <b>Percentage of individuals reached by the public awareness campaign who take at least one energy saving action (OC 6)</b>									
UNIT:  % of individuals	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>		<i>Event</i>		<i>Date</i>				<i>total</i>
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<i>Y1</i>		<i>Y2</i>		<i>Y3</i>		<i>End of Project</i>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
		<i>0</i>	<i>0</i>	<i>0</i>			<i>10%</i>		<i>10%</i>

INDICATOR TITLE: Expected lifetime energy savings from energy efficiency or energy conservation, as a result of USG assistance (OC 7)									
UNIT:  Gigajoules (GJ)	DISAGGREGATE BY: None								
	Geographic Location	Event			Date		total		
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
		0	0	0	19 929 600	19 929 600	44,583,4 06.65		

INDICATOR TITLE: <b>Projected greenhouse gas emissions reduced or avoided through 2030 from adopted laws, policies, regulations, or technologies related to clean energy as supported by USG assistance (OC 8)</b>									
UNIT:  Metric tons of CO <sub>2</sub>	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
		0	0	0	1,699,54 9.7	1,699,54 9.7	3,237,40 2.00		

INDICATOR TITLE: <b>Number of low emissions development plans developed and/or implemented as a result of USG assistance (LEDS, SEAP, other) (OP I)</b>									
UNIT:	DISAGGREGATE BY: Phase of implementation (developed, implemented)								
No. of Plans developed	Geographic Location		Event		Date			total	
	Bolnisi		SEAP for Bolinisi Municipality		January-March, 2016			1	
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
	No. of Plans developed	0	3	3	4	4	3	1	10

INDICATOR TITLE <b>Number of Sustainable Energy Offices (SEOs) or shared Sustainable Energy Resource Centers established in participating municipalities(OP 2)</b>									
UNIT:  No. of Sustainable Energy Offices/ Sustainable Energy Resource Centers established	DISAGGREGATE BY: <i>New offices, ongoing offices</i>								
	<i>Geographic Location</i>		<i>Event</i>		<i>Date</i>			<i>total</i>	
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
	No. of Offices created	0	0	0	3	0	2		5

INDICATOR TITLE: <b>Number of stakeholders using climate information in their decision making as a result of USG assistance (OP 4)</b>									
UNIT:  Number of Stakeholders	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	Y1		Y2		Y3		<i>End of Project</i>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
<b>No. of Stakeholders</b>	<i>0</i>	<i>8</i>	<i>12</i>	<i>6</i>	<i>8</i>	<i>2</i>		<i>16</i>	

INDICATOR TITLE: <b>Number of laws, policies, strategies, plans, agreements or regulations addressing climate change mitigation officially proposed, adopted, or implemented as a result of USG assistance (OP 5)</b>									
UNIT:	DISAGGREGATE BY: <i>None</i>								
Number of Laws, Policies, Strategies	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
No. of Laws, Policies, Strategies	0	<i>1 proposed</i>	<i>1 proposed</i>	<i>1 proposed</i>		<i>1 adopted</i>		<i>1 adopted</i> <i>2 proposed</i>	

INDICATOR TITLE: <b>Number of climate change mitigation tools, technologies or methodologies developed, tested and/or adopted as a result of USG assistance (OP 6)</b>									
UNIT:  Number of  Tools	DISAGGREGATE BY: None								
	Geographic Location	Event		Date			total		
							/		
Results:									
<b>Additional Criteria</b>  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
	No. of Tools	0	1	2	2	2	2		5

INDICATOR TITLE: <b>Number of households/ business/ public institutions implementing energy efficiency measures as a result of USG assistance (OP 7)</b>									
UNIT:  No. of electricity consumers implementing energy efficiency measures	DISAGGREGATE BY: <i>None HH, Businesses, Institutions</i>								
	<i>Geographic Location</i>	<i>Event</i>		<i>Date</i>			<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	Y1		Y2		Y3		End of Project	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
		0	0			1000		1500	
				500					
	0								
No. of Households				2					
No. of businesses	0								
No. of institutions	0			2		8		10	

INDICATOR TITLE: <b>Number of climate change mitigation projects implemented as a result of USG assistance (OP 8)</b>									
UNIT:  No. of climate change mitigation projects	DISAGGREGATE BY: None								
	Geographic Location	Event		Date				total	
	For all municipalities	Kutaisi “Torpedo” –“ Installation of Solar Thermal System and Lighting”  Tbilisi Elderly house–“ Installation of Solar Thermal System and Lighting”						2	
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
	No. of Projects	0	0	0	5	2	15		20

INDICATOR TITLE: <b>Number of individuals reached through outreach campaigns (OP 10)</b>									
UNIT:  Number of  Individuals	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>		<i>Date</i>		<i>total</i>			
	<i>Village Misaktsieli, Georgia</i>	<i>Youth EE Event Presentation “How to Save Energy”</i>		<i>December 15, 2015</i>		<b>22 female, 21 male (43 total)</b>			
		<i>Contest “Energy Efficiency Is A Smart Choice”</i>		<i>October-December, 2015</i>		<b>2585 likes on facebook</b>			
		<i>People reached through EC-LEDS Facebook</i>							
<i>Mtskheta, Georgia</i>	<i>Youth EE Event “How to Save Energy -Contest Energy”- Contest Efficiency Is A Smart Choice”</i>		<i>March 23, 2016</i>		<b>24 female, 17 male (total 41)</b>				
	<i>People reached through EC-LEDS Facebook</i>		<i>January-March, 2016</i>		<b>3230 likes on facebook</b>				
Results:									
<b><i>Additional Criteria</i></b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	Y1		Y2		Y3 (Q1+Q2)		End of Project	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
	No. of Individuals	0	250,000	254,157	500,000	264,047	250,000	3314 2607	1 million

**INDICATOR TITLE: Number of USG-supported training or activities that contribute to building the EE knowledge and skills in the GOG, Municipalities, industry and other stakeholders (OP 11)**

UNIT:	DISAGGREGATE BY: None				
Number of Training activities	Geographic Location	Event	Date		total
	Village Misaktsieli	Youth EE Event Presentation "How to Save Energy"	December 15, 2015		1
	Bolnisi	Meeting with local experts and municipality staff on Covenant of Mayors and SEAPs	November 20, 2015		1
	Tbilisi	Preparation of project proposals for the GHGs mitigation measures to be implemented in the sectors considered in SEAPs	November 27, 2015		1
	Telavi	Meeting with Deputy Governor and coordinators on Covenant of Mayors and SEAPs	December 2, 2015		1
	Bolnisi	Meeting with local farmers and staff of Bolnisi Municipality	February 19, 2016		1
	Telavi	Meeting with staff of Telavi Municipality	March 3, 2016		1
	Tbilisi	Training on SEAP Monitoring	March 31, 2016		1
	Mtskheta	Youth EE Event Presentation "How to Save Energy"	March 23, 2016		1

<b>Results:</b>									
<b>Additional Criteria</b>		Y1		Y2		Y3 (Q1+Q2)		End of Project	
<i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
No. of Training activities	0	6	10	30	22	14	8	50	

INDICATOR TITLE: <b>Value of grants disbursed as a result of USG assistance for scientific research and energy efficiency pilot projects (OP 13)</b>									
UNIT:	DISAGGREGATE BY: <i>None</i>								
Value of grants distributed	Geographic Location	Event			Date		Total		
	For all municipalities								
Results:									
Additional Criteria	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
If other criteria are important, add lines for setting targets and tracking									
Value of grants	0	0	0	300,000	\$175,012	324988		500,000	

INDICATOR TITLE: <b>Number of promotional plans and campaigns implemented to increase awareness of citizens about energy efficiency (OP 14)</b>									
UNIT:  No. of Plans	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b><i>Additional Criteria</i></b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b><i>Baseline</i></b>	<i>Y1</i>		<i>Y2</i>		<i>Y3</i>		<i>End of Project</i>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
	<i>No. of Plans</i>			<i>2 (Implementation Ongoing)</i>					
	<i>0</i>	<i>2</i>		<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>

INDICATOR TITLE: <b>Number of beneficiaries receiving improved infrastructure services due to USG assistance (OP 15)</b>									
UNIT:  No. of beneficiaries receiving improved infrastructure services	DISAGGREGATE BY: <i>None</i>								
	<i>Geographic Location</i>	<i>Event</i>			<i>Date</i>		<i>total</i>		
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	<b>Y1</b>		<b>Y2</b>		<b>Y3</b>		<b>End of Project</b>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
	No. of Beneficiaries	0	0	0	1		2		3

Indicator Title: <b>Number of MRV plans developed to track impact of SEAPs implementation(OP 17)</b>									
Unit:	Disaggregate by: None								
No. of Plans	Geographic Location	Event			date			total	
	Bolnisi	MRV Plan or Bolnisi			January-March, 2016			1	
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2,		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
No. of Plans	0	4	4	3	3	3	1	10	

INDICATOR TITLE: <b>Number of individuals at national and local level trained in climate change as a result of USG assistance (OP18)</b>									
UNIT:	DISAGGREGATE BY: <i>None</i>								
No. of Individuals	Geographic Location	Event		Date		total			
	Tbilisi	On-job training on elaboration of Markal for Analytical Department of Ministry of Energy and Environment		October-December, 2015		5 (2 females, 3 males)			
	Tbilisi	Training on Preparation of project proposals for the GHGs mitigation measures to be implemented in the sectors considered in SEAPs		November 27, 2015		23 (12 females, 11 males)			
	Tbilisi	Training on SEAP Monitoring		March 31, 2016		11 (4 females, 7 males)			
	Tbilisi	On-job training on Markal-discussion on renewable model		January-March, 2016		5 (2 females, 3 males)			
Results:									
Additional Criteria  If other criteria are important, add lines for setting targets and tracking	Baseline	Y1		Y2		Y3		End of Project	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
	No. of Individuals	0	10	67	40	171	20	44	70

INDICATOR TITLE: <b>Number of decisions made by LEDS steering committee or involved agencies using analysis based on MARKAL or other appropriate tools (OP22)</b>									
UNIT:	DISAGGREGATE BY: <i>None</i>								
Number of decisions	<i>Geographic Location</i>		<i>Event</i>			<i>Date</i>		<i>total</i>	
Results:									
<b>Additional Criteria</b>  <i>If other criteria are important, add lines for setting targets and tracking</i>	<b>Baseline</b>	Y1		Y2		Y3		<i>End of Project</i>	
		<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>	<i>Target</i>	<i>Achieved</i>
	No. of decisions		0	0	2		2		4

## **ANNEX I: SCHEDULE OF PLANNED FUTURE EVENTS**

### **A. COMPONENT ONE**

Continue technical support in the development of SEAPs and project proposals for the remaining two municipalities

Continue providing capacity building for the Municipality representatives by conducting

- a. Workshops (2)
- b. On the job trainings (regular)
- c. Technical tools (final version of muni-EIPMP)

### **B. COMPONENT TWO**

Task Completed

### **C. COMPONENT THREE**

Technical assistance:

- a. Analysis of mitigation options
- b. Development of MARKAL-Georgia Guidebook
- c. Development of four LEDS chapters on energy sector, buildings, transport, and industry facilitation of LEDS discussions.
- d. Facilitation in organizing LEDS steering committee meetings, sub-working groups meetings, and experts groups meetings to discuss LEDS document table of contents, technical analysis of sectors, sectoral strategies, and mitigation options;
- e. Training of Analytic Department of the Ministry of Energy for policy analysis by using MARKAL-Georgia

### **D. PUBLIC OUTREACH**

Airing EC-LEDS EE PSAs will continue on National TV channels. EC-LEDS Youth EE Events will take place in April and June 2016 in Rustavi and Kutaisi municipalities.

CBSM pilot will be launched in Kutaisi in the beginning of June, 2016 (date of launch will be confirmed by Kutaisi Municipality in mid-May).

**Table 3. Upcoming Events for year three, quarter two**

Component	Event	Date/Location
Public Outreach	Youth EE Event	Rustavi, April, 2016
Public Outreach	Youth EE Event	Kutaisi, June, 2016
Public Outreach	CBSM Kutaisi Pilot	June, 2016 (launch date will be confirmed in May 2016)

## **E. ENVIRONMENTAL COMPLIANCE**

EC-LEDS program will continue finalizing the second round sub-grant projects related Activity-Specific Environmental Mitigation and Monitoring documentation in accordance with USAID environmental compliance procedures and approved EC-LEDS PEA.

## **ANNEX II:QUARTER THREE PLANNED DELIVERABLES AND PRODUCTS**

### **A. COMPONENT ONE**

- Telavi SEAP with MRV plan and Project Proposal
- English version of Bolnisi Municipality SEAP, MRV Plan and Project Proposal.
- Training Report.
- Establishment of SEO or SEO functions integrated in 4 Municipalities

### **B. COMPONENT TWO**

- Task Completed

### **C. COMPONENT THREE**

- Overview of each sector considered in MARKAL(Energy, Transport, Industry, Building) developed including trend analysis
- Updated BAU Report
- Analysis of Selected Mitigation Measures Using MARKAL-Georgia

### **D. COMMUNICATIONS AND OUTREACH**

As part of the EC-LEDS outreach activities, the program will produce media coverage reports for upcoming events and Report on Youth EE Events where applicable. A series of printed materials in the framework of CBSM campaign will be prepared, including flyers on energy efficiency and renewable energy. The Communication plans for the SEAPs will be prepared. EC-LEDS will produce Report on findings of CBSM pilot in Kutaisi Municipality.

### **E. MONITORING AND EVALUATION**

Intellectual outputs will be uploaded to Development Experience Clearinghouse.

### **F. ENVIRONMENTAL COMPLIANCE**

Following the scope of 22 CFR 216 Environmental Compliance Procedures and approved Programmatic Environmental Assessment (PEA) document, EC-LEDS will analyze selected sub-grant activities against specific impact factors, including: the character of proposed actions, the type of structural measures, and whether the proposed structural actions, their impacts, and mitigation measures are considered in the PEA defined EMMPs. Depending on the project -specific individual assessments, either “Activity-Specific Environmental Monitoring and Mitigation Plan (EMMP) and/or Environmental Review Checklists (ERCs)” documents will be produced. Right after the completion

of the project related activities, “Record of Compliance with the EMMP” document will be submitted to USAID.

## ANNEX III: REPORT ON EC-LEDS YOUTH ENERGY EFFICIENCY EVENT



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ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT  
STRATEGIES (EC-LEDS) CLEAN ENERGY PROGRAM

COOPERATIVE AGREEMENT NO. 114-A-13-00008

# REPORT ON EC-LEDS YOUTH ENERGY EFFICIENCY EVENT MTSKHETA



March 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Winrock International Georgia.

ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT  
STRATEGIES/EC-LEDS CLEAN ENERGY PROGRAM

# REPORT ON EC-LEDS YOUTH ENERGY EFFICIENCY EVENTS

March, 2016

## DISCLAIMER

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## EXECUTIVE SUMMARY

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The EC-LEDS Youth Energy Efficiency Event was held in Mtskheta on March 23<sup>rd</sup>, 2016. Participants of the events were youth in the 9<sup>th</sup>-12<sup>th</sup> grades selected from the “Momavlis Taoba” (Future Generation) Program. The purpose of the event was to involve youth in energy efficiency, contributing to climate change mitigation.

This report presents a description, the list of participants, and an overview of materials used for the event.

## YOUTH EE EVENT

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### PARTICIPANTS

The EC-LEDS Youth Energy Efficiency Event was attended by a total of 41 youth in the 9<sup>th</sup> to 12<sup>th</sup> grades from the villages of Sakramuli, Nichbisi and Sioni (24 females, 17 males).

Full lists of participants are provided in **Attachment A**<sup>1</sup>.

### CONTENT

The EC-LEDS Youth Energy Efficiency Events were 2.5 hours long, of which the first two hours were dedicated to “How to Save Energy”. The seminar covered the following topics:

- **What is Energy Efficiency**: A brief introduction to energy efficiency and explanation of energy terms.
- **Ways to Save Energy**: Various ways to save energy and the energy audit.
- **Information Campaigns**: A brief description of advertising and information campaigns about energy efficiency.
- **The Importance of Energy Efficiency**: The importance of energy efficiency with regard to the rational use of energy, energy security of the state, and the importance of energy efficiency for Georgia.
- **Energy Efficiency in the Residential Sector**: How to save energy at home.
- **Energy Efficient Technologies**: An introduction to technologies and appliances.
- **Renewable Energies**: Renewable energy sources were discussed with examples of technologies and how to use them.
- **Energy Efficient Projects**: Some energy efficient projects supported by donor organizations.

In the second part of the event the students participated in contests and given simple EE tests covering the topics of the session. The top three winners were awarded with medals. All students and teachers were awarded with participation certificates. The contest questions are provided in **Annex B**.

### PRESENTER

The EC-LEDS Youth energy efficiency events were conducted by Dean of Energy and Telecommunications Faculty at Georgian Technical University, Professor. The seminar topics and presentation were developed specifically for EC-LEDS Youth Energy Efficiency Event by presenter in cooperation with EC-LEDS staff.

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<sup>1</sup> The list of participants misses 2 students.

## **VENUE, TIMING AND LOGISTICS**

The EC-LEDs Youth Energy Efficiency Event was held in the building of Mtskheta Municipality Gamgeoba (Administrative Body of the Mtskheta Municipality).

The materials were in Georgian and the events were free for all participants.

The event was organized by EC-LEDs in collaboration with PH International within the framework of the USAID-supported “Momavlis Taoba” (Future Generation) Program.

## CONCLUSION

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Youth participated actively, with questions and lively discussions. All participants noted the importance of organizing similar events, as such meetings contributed to their awareness of the subjects. They were satisfied with all aspects of the training and confirmed that the presentations met their expectations. After the events, students made commitments to conduct simple home energy audits and spread the word about energy saving among their families and schools.

# ATTACHMENT A: CONTEST QUESTIONNAIRE



## Contest “Energy Efficiency Is A Smart Choice”

Name, Surname \_\_\_\_\_

City \_\_\_\_\_

School # \_\_\_\_\_

**Please select the correct answer:**

**1. Location of a refrigerator near heating devices affects the efficiency of its operation:**

a. Positively \_\_\_\_\_

b. Negatively \_\_\_\_\_

**2. A TV set in stand-by mode consumes electricity:**

a. Yes \_\_\_\_\_

b. No \_\_\_\_\_

**3. What is the impact of hot dishes placed in the refrigerator?**

a. Reduces energy consumption of the appliance \_\_\_\_\_

b. Increases energy consumption of the appliance \_\_\_\_\_

**4. Is it more efficient to read a book by the window to use daylight efficiently?**

a. Yes \_\_\_\_\_

b. No \_\_\_\_\_

**5. When using water heater tank (e.g. Thermex) should the regulator be set at the maximum position?**

a. Yes \_\_\_\_\_

b. No \_\_\_\_\_

**6. In order to maintain warmth in the room generated from fire place or wood stove, is there a need to lower or close the cover in case of their extinguishment?**

a. Yes \_\_\_\_\_

b. No \_\_\_\_\_

**7. 80% of consumed energy in a dwelling is consumed by:**

a. Heating \_\_\_\_\_

b. Cooking \_\_\_\_\_

c. Water heating \_\_\_\_\_

**8. Is it possible to detect a draught's direction with a candle?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**9. Is it necessary to ensure air tightness of doors and windows to reduce energy consumption?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**10. Can packaging tape ensure energy saving if it is fixed on both sides of a cracked window glass?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**11. Is it more efficient to open a window frequently and for a short time to air a storage area?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**12. When do we spend more energy: while taking a bath or a shower?**

- a. Bath \_\_\_\_\_
- b. Shower \_\_\_\_\_

**13. When cooking, can improperly selected saucepans be a cause for energy loss?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**14. When cooking, should a pan fit the size of the burners?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**15. A rounded bottom or wrong size of a pan prolongs cooking time by:**

- a. 10% \_\_\_\_\_
- b. 40% \_\_\_\_\_
- c. 120% \_\_\_\_\_

**16. Can a label fixed on home appliances help us detect the energy efficiency of an appliance?**

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_

**17. Can we save energy if we turn the TV set off of stand-by mode?**

- a. No \_\_\_\_\_
- b. Yes \_\_\_\_\_

**18. In order to save energy one should start ironing:**

- a. From the lowest temperature \_\_\_\_\_

b. From the highest temperature \_\_\_\_\_

**19. Is it possible to get the same light from 25 watt bulb as from 100 watt bulb?**

a. Yes \_\_\_\_\_

b. No \_\_\_\_\_

**20. By using modern energy efficient bulbs, we can reduce energy consumption by:**

a. 15% \_\_\_\_\_

b. 60% \_\_\_\_\_

c. 100% \_\_\_\_\_

**Correct Answers**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
b	a	b	a	b	a	a	a	a	a	a	a	a	a	b	a	a	a	a	b

## ATTACHMENT C: AWARDS

### Certificate



### Medals



## Caps, T-shirts, Pens



## ANNEX IV: MEDIA COVERAGE REPORT



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# ENHANCING CAPACITY FOR LOW EMISSION DEVELOPMENT STRATEGIES (EC-LEDs) CLEAN ENERGY PROGRAM

COOPERATIVE AGREEMENT NO. 114-A-13-00008

## MEDIA COVERAGE REPORT



March 2016

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ENHANCING CAPACITY FOR LOW EMISSION  
DEVELOPMENT STRATEGIES (EC-LEDS) CLEAN ENERGY  
PROGRAM

# MEDIA COVERAGE REPORT

March, 2016

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**Source:** CENN Network  
**Date:** March 23, 2016  
**Title:** Energy Efficiency Is A Smart Choice – Youth EE Event Continues in Mtskheta-Mtianeti Region

The USAID-supported Enhancing Capacity for Low Emission Development Strategies (EC-LEDS) Clean Energy Program empowers youth through training on energy efficiency and renewable energy technologies. Students from the villages of Sakramuli, Sioni and Nichbisi took part in a Youth Energy Efficiency Event on March 23, 2016 at 14:00 pm, to discuss energy efficiency contributing to climate change mitigation.

The students were selected from Momavlis Taoba (Future Generation) program partner schools in the 9th to 11th grades of Mtskheta, Mtianeti and Dusheti Municipalities in collaboration with the Mtskheta-Mtianeti Anti-Violence Committee Network of Georgia. The Committee implements the Momavlis Taoba project with 27 partner public schools in the region. The Momavlis Taoba program, funded by USAID, is being implemented in Georgia by PH International and supported by the Ministry of Education and Science of Georgia.

During the event, carried out in the Misaktsieli School, students were given a presentation on “How to Save Energy”. This was followed by a contest, “Energy Efficiency is a Smart Choice”, to demonstrate the Energy Efficiency skills acquired at the seminar. This seminar was carried out by the Dean of the Energy and Telecommunications Faculty at Georgian Technical University, Professor. Professor described energy efficiency, ways of saving energy, the energy audit, energy efficiency in residential sectors, energy efficient technologies, simple tips to save energy at home, energy-efficient appliances, renewable energies, energy efficient/renewable energy projects carried out with donor support as well as energy efficiency and climate change. The winners received medals, and all students were given participation certificates.

The EC-LEDS Clean Energy Program is supported by USAID and implemented by Winrock International Georgia. Through this project, USAID supports Georgia’s efforts to increase climate change mitigation through energy efficiency and clean energy activities and enable more responsible management and development of Georgia’s natural resources.

**Source:** Commersant.ge  
**Date:** March 25, 2016  
**Title:** Opening of the Energy Efficient and Energy Saving Classroom in the Tbilisi State Academy of Arts

On March 25th the Tbilisi State Academy of Arts will host the opening ceremony of Energy Efficient and Energy Saving Classroom. The classroom was completed in the framework of a Memorandum between Union of Experts Sustainable Energy and Environment, LTD Nova, Company Izocam and Tbilisi State Academy of Art.

This project was implemented with the financial support of NOVA ltd and Company IZOCAM. The goal of this activity is to showcase the energy efficient and energy saving technologies to the guests and emphasize the importance of energy efficient measures to the students of architecture, construction and energy faculties in the process of project design, construction or rehabilitation. Issues of efficient cooperation and support are under discussion among ministries, embassies and universities.

The event will be attended by Tbilisi Vice Mayor, Deputy Minister of Economy and Sustainable Development, Winrock International (USAID supported Program EC-LEDS) Chief of, Marketing Director of IZOCAM and other honorable guests.